

REMARKS

This Amendment is being submitted in response to the Office Action dated September 30, 2008. Claim 1 is amended., and claims 2, 4, and 5 are canceled. Claims 1 and 3 remain pending in this application. This Amendment further acknowledges the Advisory Action of December 30, 2008.

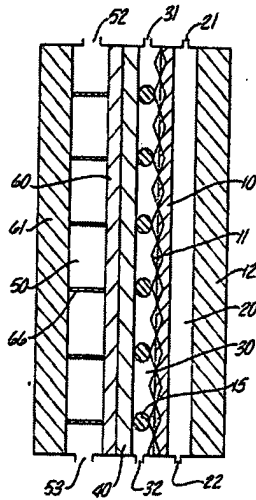
First, the Applicant discusses the procedural history of the claim amendments to clarify the claims' current status. In the Applicant's response dated August 11, 2008, claims 2-5 were improperly identified as "withdrawn" as there was no restriction or election of species requirement, and the Examiner noted this inconsistency in the Office Action dated September 30, 2008. Thus, the Examiner considered the claims as being neither canceled nor withdrawn, and noted that if these claims are not affirmatively canceled, they will be considered in future actions.

Accordingly, in Applicant's response after final rejection dated December, 23, 2008, the Applicant canceled claim 2, 4, and 5. In the Advisory Action dated December 30, 2008, however, the Examiner indicated that claims 2-5 were withdrawn because Applicant did not affirmatively reinstate them. Furthering the confusion, in the Advisory Action, the Examiner indicated that the proposed amendment (with claims 1 and 3 pending, and claims 2, 4, and 5 canceled) was to be entered. Thus, the Applicant assumes that the claim set as presented in Applicant's response dated December 23, 2008, and resubmitted in this response represents the current claim set. If this assumption is incorrect, the Applicant respectfully requests clarification of the status and content of the current claim set.

Second, the Applicant will discuss the substance of the Examiner's rejection. In the Office Action the Examiner rejected claim 1 under 35 U.S.C. § 102(b) as being anticipated by Plowman et al. (US 47326600), and the Examiner maintained this rejection in the Advisory Action dated December 30, 2008. The Examiner asserts that Plowman sets forth a .254 mm thick mesh auxiliary electrode that is between the cathode and the electrolyte membrane by submitting that the "current collector" of Plowman is an "auxiliary electrode" because both components are made of the same materials.

The Applicant notes that claim 1, as amended, requires “a polytetrafluoroethylene spacer for providing a gap between the solid polymer electrolyte membrane and said anode” and “an auxiliary electrode sandwiched between the cathode and the solid polymer electrolyte membrane and in direct contact there between.”

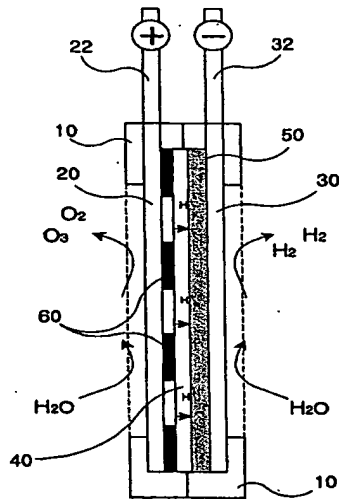
Plowman's electrolyzer is designed for use in the electrolysis of brine to produce an aqueous alkali metal hydroxide solution and halogen, having a cathode 10, anode 60, spacing means 15 separating the current distributor 11 and membrane 40. Below is the electrolyzer as disclosed in Plowman.



As previously mentioned, the Examiner equates Plowman's metal mesh current distributor 11 to Applicant's auxiliary electrode. (The Applicant assumes that the terms "current distributor" and "current collector" in Plowman are used interchangeably to refer to the same component of the electrolyzer.) Plowman's current distributor 11 is adjacent to and in contact with a gas diffusion cathode 10. The current distributor 11 is a metal mesh, and spacer rods 15 separate the current distributor 11 from the ion exchange membrane 40. This separation creates catholyte compartment space 30. Accordingly, the current distributor 11—"auxiliary electrode"—is clearly not in contact with the membrane 40 as required by claim 1.

Furthermore, in Plowman, the anode 60 is adjacent to and in connect with the ion exchange membrane 40, as the spacer rods 15 provide a gap only between the ion exchange membrane 40 and the current distributor 11. Thus, Plowman also fails to disclose a spacer 15 for providing a gap between the solid polymer electrolyte membrane 40 and said anode 60 as required by claim 1.

In contrast is the Applicant's claimed apparatus for producing ozone by electrolysis, which is shown below.



As claimed in claim 1, the auxiliary electrode 50 is inserted between the cathode 30 and the solid polymer electrolyte membrane 40 to reduce scale formation on the surface of the cathode 30. Thus, the Applicant's auxiliary electrode 50 maintains direct contact with both the cathode 30 and membrane 40. Applicant clearly describes and illustrates its auxiliary electrode 50 as providing close contact between the cathode 30 and the solid polymer electrolyte membrane 40. Further, the spacer 60 is placed in between the anode 20 and membrane 40, providing a gap there between.

Accordingly, the Applicant submits that Plowman fails to anticipate the present invention because prior art anticipates a claim only if every element of the claim is taught by a single prior art reference. MPEP § 2131 (citing *Verdegaal Bros. v. Union Oil Co.*, 814 F.2d 628,631 (Fed. Cir. 1987)). Thus, because Plowman fails to disclose *a spacer for providing a gap between the solid polymer* and fails to disclose *an auxiliary electrode sandwiched between the cathode and*


the solid polymer electrolyte membrane and in direct contact there between, claim 1 is patently distinguished.

Moreover, the prior art must teach the invention in as complete detail as is contained in the claim. MPEP § 2131 (citing *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989)). And claim 1 requires the *auxiliary electrode [have] the form of a mesh net having 10~100 meshes*. Plowman, however, fails disclose using a mesh net having 10~100 meshes. Thus, in addition to Plowman failing to each every element, Plowman fails to teach the mesh in as complete detail as is contained in claim 1, and accordingly, claim 1 is patently distinguished.

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In light of the foregoing amendments and argument, Applicant asserts that all claims are now in condition for allowance.

Respectfully submitted,


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